NOVEMBER 1946

FIREMEN

FIFTIETH ANNIVERSARY YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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THE ADJUSTABLE NOZZLE

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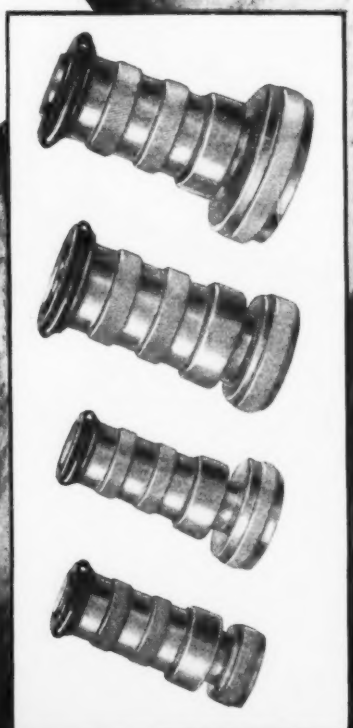

A TWIST OF THE WRIST GIVES INSTANT ADJUSTMENT

AMERICAN-LAFRANCE-FOAMITE Corporation

ELMIRA · NEW YORK · U.S.A.

There is an Alfcospray Model E Nozzle available for all sizes of hose from ¾" to 2½", to suit your requirements.

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Good fire alarm box distribution alone is not enough — the boxes in order to serve their purpose must be quickly found when needed. The Underwriters' Standards provide that a box should be *plainly visible from the main entrance of any building in congested districts* and Section 206-11 of the Standards also provides:

"Boxes shall be conspicuously located at street corners where practicable. The box and a portion of the supporting pole or post shall be painted 'Signal' red, preferably with white stripes above and below the red. A special colored light shall be provided at or near every box in closely built sections, to indicate location at night."

Excessive fire losses are almost invariably caused by delayed alarms. Why not investigate, in your city, the AVAILABILITY AND VISIBILITY of the means for sending alarms?

Remember, every minute of delay in calling the Fire Department accelerates the spread of fire and increases the fire loss — and that the municipality should provide adequately for the public safety.

Write for booklet entitled
"It Can Happen Here"

We survey cities and towns and prepare recommendations and estimates, without cost or obligation, at the request of any authorized city official.

The illustration shows the proper method of installing boxes — ON PEDESTALS WITH INDICATING LIGHTS

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

In Canada: Northern Electric Company, Limited, Montreal

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Mack
FIRE APPARATUS

MACK MANUFACTURING CORPORATION • Fire Engine Dept.
Empire State Building, New York 1, N. Y.

PERFORMANCE COUNTS!

Seven men fit in the cab of this up-to-the-minute Mack Pumper just added to the **Orlando, Florida Fire Dept.** It's a 1,000-gallon triple-combination pumper featuring the canopy cab, a basic advance for crew protection.

Mack Fire Apparatus now guards more than a thousand communities. Progressive town planners the country over look to Mack's superior performance and dependability with absolute confidence. Why not give your town the same security? Talk it over with a Mack fire equipment expert.

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

Firemen

Volume 13 Number 11

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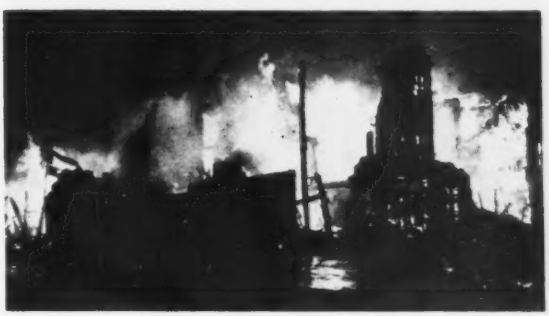
DO FIRE prevention efforts pay? That is a question that often comes to the mind of the conscientious fire fighter who wonders whether hours spent ferreting out fire hazards, talking to property owners, trudging up and down stairs, or poking into dusky attics and dank basements really does prevent fires. As he walks or rides through the streets of his community, he has no way of knowing for certain which buildings now standing would not be there but for his fire prevention salesmanship. Would that cracked old chimney, devoid of mortar, really have started a fire if he had not persuaded the owner to hire a mason? Would that rusty and half-clogged smoke pipe in the store basement really have sponsored a "midnight alarm?"

One of the best answers to these and other questions about fire prevention occurred in Hot Springs, Ark., at 12:53 A.M. on the morning of September 14. A radio patrol car was passing the 53-year-old Great Northern Hotel, a big, 3-story, brick-joisted building with open stair shafts and without fire walls or fire doors to restrict the spread of flames down the hallways. Noting a fire on the third floor, the prowl car radioed an alarm before a call was received from the night clerk or the porter. The latter was supposed to make 30-minute rounds of the structure.

According to Chief Waldon Rasberry, one of the guests admitted that he had been smoking in bed and went to sleep. When he was awakened, his bed was on fire. He pulled the mattress off the bed and onto the floor, scattering fire which ignited curtains and wall paper. Had an alarm been given promptly, the fire department could have confined the fire to the third floor, but, due to the headway when the alarm was received, three persons lost their lives and twelve were injured. Deaths were due to burns and injuries from jumping from the building.

The story might have been worse but for a statewide fire prevention program conducted a few weeks prior to the fire. According to George D. Suter, manager of the Arkansas Fire Prevention Bureau (NFPA member), the Arkansas



Press Association, Inc.

Great Northern Hotel fire.

Fieldmen, a group of fire insurance company representatives, started in July to inspect all hotels in the state. This was done with the support of the bureau and the Arkansas Hotel Men's Association. The Great Northern Hotel was inspected on July 31 by two insurance company men, one a former Arkansas Fire Prevention Bureau employee. They found the hotel to be the worst in Hot Springs from a life hazard standpoint. Their recommendations were discussed with the hotel manager, the insurance agent who handles the property, and the owner who lives in another city. The State Fire Marshal was to send out the recommendations in writing, but the fire intervened.

Fortunately, the manager of the hotel was cooperative. The very bad rubbish condition was remedied and ventilating fans, which had been installed in windows leading to the fire escape, were moved to make the fire escape accessible to the second and third floors. A second stairway leading from the street to the second floor, which had been blocked off and rented, had not been restored as recommended. It is felt certain, however, that this inspection resulted in the saving of several lives, and the inspection work is continuing in other cities with renewed interest.

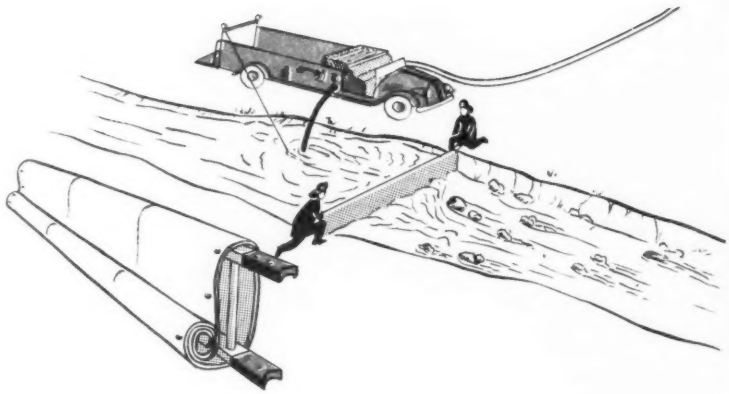
THE cover picture this month was taken at the September 28 dedication service of the new Maryland Fire Service Building on the campus of the University of Maryland at College Park. At the time the photograph was being taken, the Annapolis, Md., Water Witch Hook and Ladder Company was demonstrating their ladder truck.

A more extensive report on the dedication ceremony will be found on page 14. Plans of the Fire Service Building appeared in the *Volunteer Firemen*, August 1945, page 10.

Mack Fire Apparatus is backed by the greatest engineering resources in the industry.
thousand communities. Progressive town planners the country over look to Mack's superior
Empire State Building, New York 1, N. Y.
PERFORMANCE COUNTS!

Tricks of the Trade

EVERY fire department has up its sleeve dozens of little tricks worked out through years of experience that have made the fire fighting job easier or safer. The editors of FIREMEN present a few of the suggestions that have been picked up from departments in various parts of the country. Perhaps readers have other ideas that they think should be passed along to the FIREMEN audience.



Damming Streams

Down in West Virginia it frequently happens that a fast-running mountain stream is the only available source of water for rural fire fighting. A number of fire departments in that state have become adept at quickly damming such streams.

One method (at right) is to wrap the 12-foot roof ladder from the pumper with a salvage cover. (Standard salvage covers are 12 x 18 feet.) The ladder and cover are placed in the path of the stream with the cover holding the water. The stream is thus dammed sufficiently to impound the flow of water to a depth that will cover the pumper's suction hose. If the stream is not of proper width, the ladder can be placed at an angle.

In some instances it may be desirable to form the dam with a pike pole instead of a ladder, as this may permit better placing of the salvage cover. If the stream is especially turbulent, one or two men wearing boots can get behind the pole to hold it in place, or ropes can be tied to the grommets in the cover.

Boosting Water up Hill

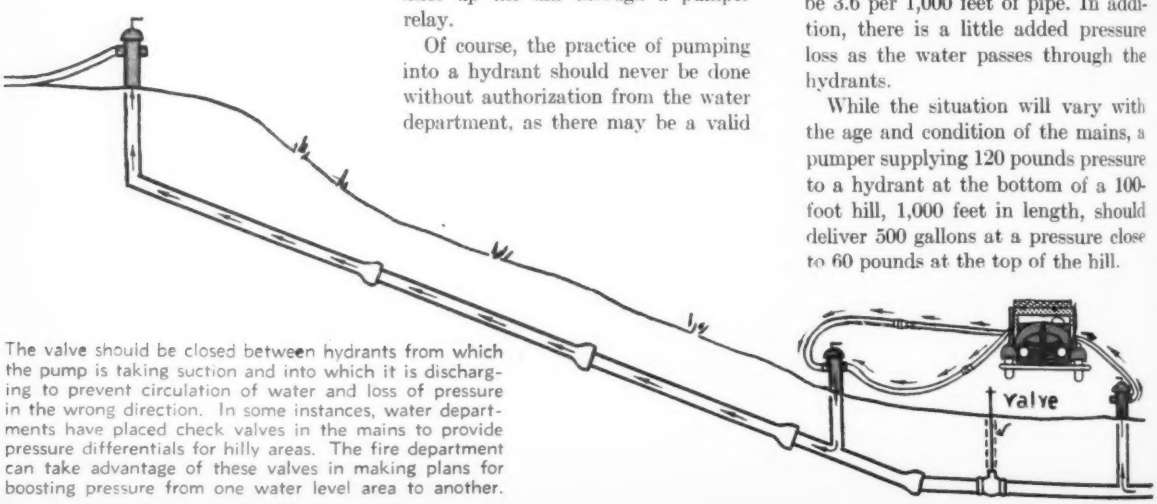
Some communities have properties located on top of hills where water pressure is too low for effective fire fighting. In such cases it may be possible for the fire department, in cooperation with the water department, to work out an arrangement to increase the water pressure at the top of the hill by using a fire department pumper pumping into a hydrant farther down the hill. The diagram below shows one arrangement whereby a pumper is taking water at the base of the hill and running two 2½-inch lines into a hydrant which is giving increased pressure to the main serving the hydrant farther up the hill.

Because of the larger diameters, there is much less friction loss in mains than in 2½-inch hose. This arrangement eliminates the need of laying long lines up the hill through a pumper relay.

Of course, the practice of pumping into a hydrant should never be done without authorization from the water department, as there may be a valid reason for not increasing the pressure in the area. It is also necessary to have the proper gates and valves to permit effective use of a fire department pumper as a waterworks booster pump. It is merely an adaptation of the reverse hydrant that is frequently used to bolster supplies to mill yard systems. When connections are made to the hydrant at the base of the hill to receive the discharge from the pumper, it is obviously necessary to open the hydrant to permit the passage of water.

In pumping 500 gallons of water up a hill through two 2½-inch hose lines, there would be a friction loss of 15 pounds in each 100 feet, in addition to the 4.34 pounds pressure required to raise the water each 10 feet. Five hundred gallons a minute passing up a hill through a 6-inch main would only lose approximately 15 pounds per 1,000 feet, plus the pressure required to overcome the elevation. If the hydrants were on an 8-inch main, the loss would be 3.6 per 1,000 feet of pipe. In addition, there is a little added pressure loss as the water passes through the hydrants.

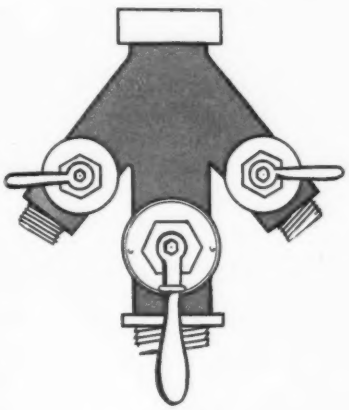
While the situation will vary with the age and condition of the mains, a pumper supplying 120 pounds pressure to a hydrant at the bottom of a 100-foot hill, 1,000 feet in length, should deliver 500 gallons at a pressure close to 60 pounds at the top of the hill.



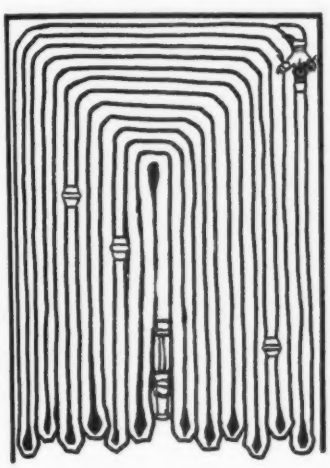
The valve should be closed between hydrants from which the pump is taking suction and into which it is discharging to prevent circulation of water and loss of pressure in the wrong direction. In some instances, water departments have placed check valves in the mains to provide pressure differentials for hilly areas. The fire department can take advantage of these valves in making plans for boosting pressure from one water level area to another.

Using a Water Thief

Where a fire department customarily lays hose from fire to hydrant, it is usually good practice to drop off enough lines at the fire to reach any desired point before the pumper goes on to the hydrant or suction source.



If 2½-inch leader lines are attached to a water thief directly at the end of the 2½-inch line, there may be insufficient hose at the fire to extend the 2½-inch



lines should the big line be needed. For this reason, some fire departments place the water thief in the top layer of hose in the hose body, 200 feet back of the nozzle. Upon stopping at the fire, the top layer is "spilled" and while the truck is proceeding to the hydrant, 1½-inch leaders are attached to the water thief which has a 2½-inch leader line already attached.

In some instances, fire departments load the top layer so that the thief is at the center of the layer and is dropped off first when the truck pulls up at the fire. This, of course, will depend on the type of load used in the local department.

When the supply line is charged, water comes to the control valves at the water thief directly in front of the building, and each leader line is turned on as desired. Normally the two 1½-inch lines will take care of an inside fire, but the big line is available as needed. Each small leader line will discharge 50 g.p.m. and a 1-inch tip on the 2½-inch leader line will discharge 200 g.p.m. If all three outlets of the water thief are used, this flow would result in a friction loss of about 22 pounds per 100 feet of 2½-inch supply line.

Storing the Rescue Boat

Hundreds of fire departments keep a rescue boat for emergency work on nearby lakes. If the boat is stored in a heated building, it is suggested that water be kept in the bottom of the craft to prevent warping or leakage. When a call for the boat is received, the brass plug can be pulled out as the boat leaves the station.

Usually the boat is kept on a trailer in the station to permit easy handling, although a few departments have arrangements whereby the craft is kept

on davits or pulleys and may be lowered quickly to the top of an available truck.

Above, the cartoonist sketched what might happen if the firemen forgot to replace the plug in the bottom of the boat.

Marking Old Hose

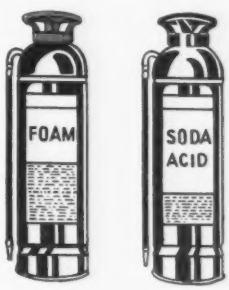
When fire hose fails to stand the annual or semi-annual pressure test at 200 or 250 pounds per square inch, its useful life may not be entirely over.

Such hose can be used for a lot of rough outdoor work such as fighting dump fires where it will prevent needless wear and tear on top condition fire hose. In order to distinguish the old hose from that in good condition, some departments paint the old hose near the couplings with a water-type paint which can be used without serious damage to the hose linings.

Some fire departments have tried painting old porous hose to prevent leakage, but this has not been entirely successful. Where old hose is in too poor condition for fire department use, it is usually transferred to the street department or to other non-emergency users.

Marking Extinguishers

Many fire extinguishers employing a different type of charge or extinguishing agent look much the same on the



outside, particularly at night. For example, many firemen have grabbed a foam extinguisher when they went for a soda-acid extinguisher, or vice versa. Accordingly, some fire departments paint the tops of the extinguishers with distinctive colors such as yellow or orange, so that the firemen will have no difficulty distinguishing the proper extinguisher.

Normally the soda-acid extinguisher is left a natural finish, as it is designed merely for use on Class A fires.

Springville, N. Y., Volunteers Battle $250,000 Fire

Twenty volunteer departments mobilize 500 fire fighters when flames threaten entire business section of this southwestern New York State village on September 13.

Taken from a report by Chief Gordon K. Rouse

IT HAPPENED in the early morning hours on September 13 — the fire that had been dreaded by Springville's firemen since their department was organized in 1882.

The village night watchman was the first to detect smoke coming out from under the cornice of the old mill in the center of Springville's business district. He immediately called the telephone operator who turned in the alarm. This was an automatic switch which, given a full turn, sounded the two sirens located at the east and west ends of the village.

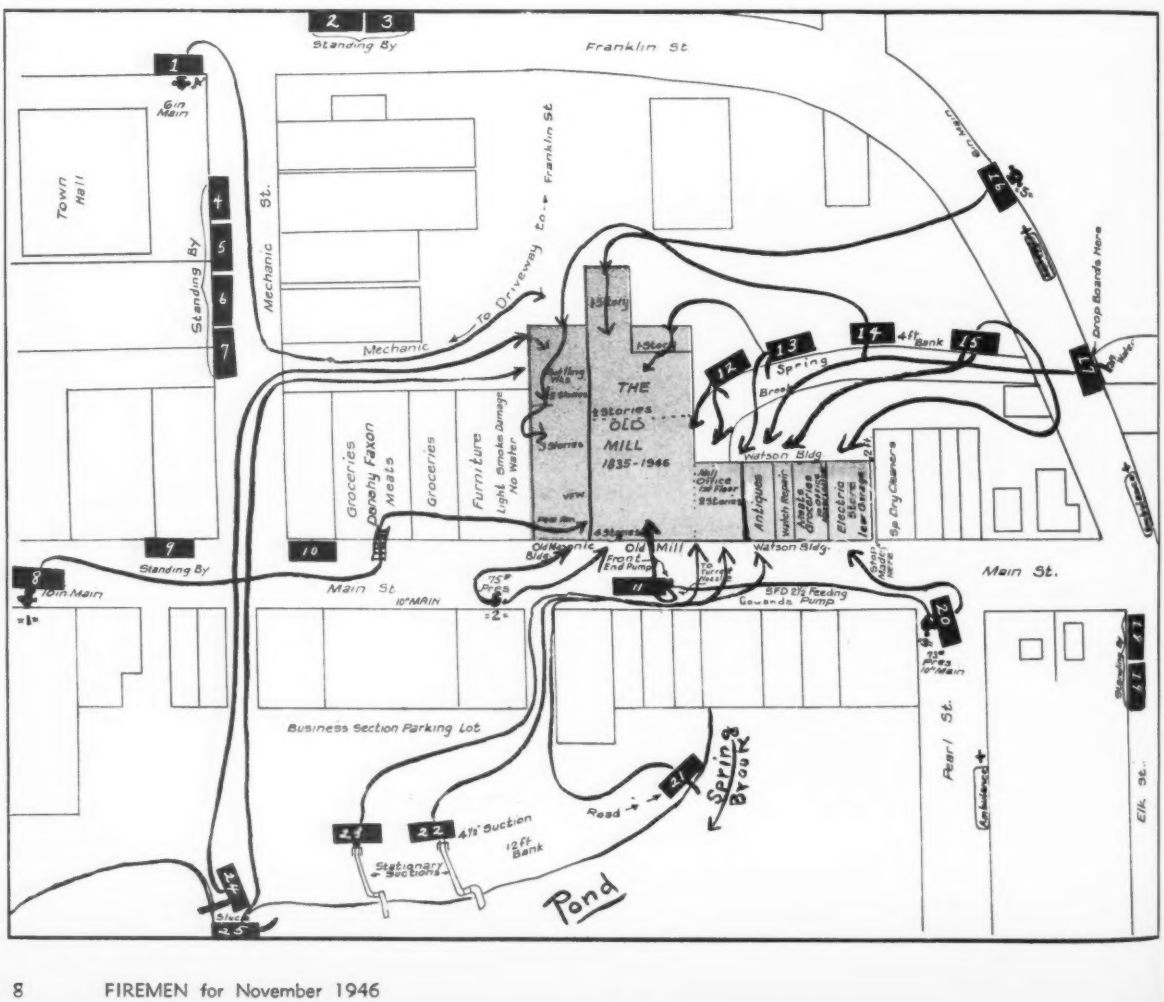
The first alarm blew at 3:08 A.M., the second at 3:20. This was only the second time in Chief Gordon K. Rouse's twenty-seven years of service that a second alarm was necessary. Fifty of the fifty-two active firemen responded. The second alarm was also instrumental in calling out many exempt firemen.

The fire started in the second floor ceiling of the Watson Building (*see map*). When the firemen arrived, it had not broken through the front, but it was visible through a window. The first firemen were entering through this window when a terrific back draft explosion occurred. Luckily, no one was hurt. In the rear, flames were coming out four windows. There was evidence that the fire was through the second floor ceiling and had broken into the attic which ran the length of the building.

The first piece of equipment, Springville's 600-gallon pumper, hooked up to a hydrant 100 feet from the building with two 2½-inch lines. A second piece of apparatus, a Ford 350-gallon pumper, took draft from Spring Brook on Franklin Street (*see map*). This spot had been prepared years before as an ideal place for emergency draft. Suspended drop boards were ready to be lowered as needed, and three feet of water was available in ten seconds.

PUMPER POSITIONS

1. Colden
2. Patchin
3. North Collins
4. Seneca Hose
5. Franklinville
6. Orchard Park
7. East Aurora
8. Hamburg No. 1
9. Gowanda
10. Salvation Army
11. Gowanda
12. Springville OCD
13. West Valley
14. Arcade
15. Delevan
16. Boston
17. Springville
18. Machias
19. Little Valley
20. Springville
21. Cattaraugus
22. Hamburg No. 2
23. Ellicottville
24. Collins Center
25. Collins

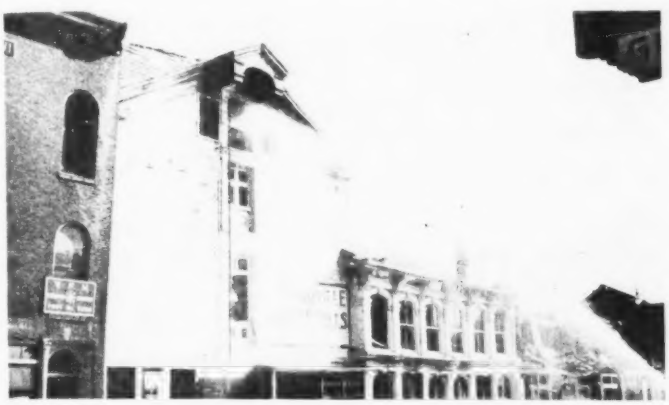


One 2½-inch line was taken from the Ford to the rear of the Watson Building, a distance of about 200 feet.

Two OCD units, which had been in storage about 1,000 feet from the fire, were pressed into service. Both were of 500-gallon capacity. The trailer unit was taken to the rear of the mill, taking suction within 50 feet of the fire. This unit operated continuously during the early hours of the fire and furnished water for all the overhauling.

The other OCD unit, a skid pump mounted on a Chevrolet truck, took position at a hydrant on Main Street across from the fire. Two 2½-inch hand lines were already in use from this hydrant, so the OCD unit was not connected.

This photograph was taken late in the morning of September 13.



This photograph shows how the roof of the mill had been raised, joining the Masonic Building at the left. This building next to the mill (left) is where the fire was stopped on the west side (see map).

Prepared drafting positions greatly expedited the first attack on the fire. Two stationary suction lines led to the pond (*see map*). A special road had been made leading to the edge of the pond, and the brook bank behind the mill and the Watson Building was always kept open.

This was about all the Springville Fire Department was able to do until help arrived. Every effort was made to stop the fire before it jumped across to the dry cleaning building two feet away on the east side of the Watson Building. This was accomplished.

Help arrived at the fire quickly and in great force. Between four and five hundred men were attacking the fire at its peak. The nearest company was only eight miles off, but of the twenty responding pumpers, several arrived from distances of twenty-six and thirty miles. Fifteen companies were in service at the fire at one point; eight others stood by, two of which cruised the west side of the village watching for possible roof fires. The responding southwestern New York companies who worked at the fire included Hamburg, Boston, Ellicottville, Little Valley, Orchard Park (all NFPA members), Patchin, Colden, East Aurora, Seneca Hose, Franklinville, Delevan, Machias, Arcade, West Valley, Cattaraugus, Collins, North Collins, Collins Center, and Gowanda.

Ladders were put up to many windows on the Main Street side of the fire and the roof of the old Masonic Building was reached by ladders from the rear. Aluminum ladders were very much in evidence. Springville's 3-section, 45-foot aluminum ladder was placed in front of Danahy Faxon's (*see map*) where it was used to take a line into the Masonic Building.

Fog nozzles with applicators helped to put out the fire that started in the roof joist of the Masonic Building. In the front, where the space between the roof and ceiling was greater, a new bent cellar pipe was used to good advantage. The roof from the mill and the old Masonic Building came together at the same level. The village air compressor was used at that point to open holes in the west wall of the latter. Through the use of these tools, streams were able to check the fire in the ceiling.

Lighting units at the rear of all buildings illuminated the fire scene and aided in preventing accidents. Gowanda, N. Y., brought an ambulance, and two local ambulances were on call, but there were no injuries or life loss. A new wig-wag flasher signal made a

Continued on page 22

This is where the fire was stopped toward the east and next to a dry cleaning establishment. The eaves were just 6 inches from the Watson Building (center).

Buffs Only in Fire Bell Club

ONE of the most interesting fire organizations in New York City is the Fire Bell Club (NFPA member) made up of a distinguished group of buffs, as fire enthusiasts are called in New York. Membership is barred only to professional firemen.

The quarters of the Fire Bell Club for several years have been on the second floor of a building adjacent to Truck 24 of FDNY. This station also houses a water tower and a search light truck. As shown in the upper photograph, regular fire station watch is maintained while the club is in session. All alarms from the Manhattan fire alarm office are received and noted in the journal.

Wide World Photos

Walls of the club, as seen in the lower photograph, are covered with scenes from famous fires and pictures of historic fire apparatus. There is a large collection of helmets donated by noted fire fighters. Many of the great and near great among the nation's fire service have appeared at meetings of the club to describe their most thrilling experiences.

This is one organization that frequently accepts interruptions to the meetings cheerfully. Receipt of a second alarm almost anywhere in the city inevitably means a mad rush out of quarters and a speaker is liable to find himself alone addressing the momento-studded walls, providing he hasn't accompanied his audience.

In the upper photograph, Joseph Hirschmann, president of the Fire Bell Club, examines a trumpet of an old volunteer fire department.

An Experiment with High-Pressure Fog

THE *Fire Chief's Quarterly Service Bulletin*, published by Chief W. Lewis Armstrong, of Old Forge, N. Y., recently contained the following account of an experience by the Homer, N. Y., Fire Department, under Chief L. Wakefield, in handling a serious fire with high-pressure fog equipment.

While many users of high-pressure fog apparatus throughout the country can cite equally interesting experiences, there are many firemen who have not had the opportunity to see it in action and they should find this item of interest.

"We have recently added 100 feet of 1-inch high-pressure hose with a high-pressure gun to our 600 g.p.m. centrifugal pump mounted on our Brockway apparatus. We were able to develop 450 pounds pressure on this pump by running the transmission in over-drive. We have experimented with this quite extensively and experienced no ill effects to our pump or equipment. Although the packing glands require a trifle more attention than when pumping at lower pressures.

"Our first actual experience occurred about two weeks ago. Upon arrival, my size-up of the situation called for a 2½-inch hydrant line, and we stopped at the fire, pulled a reverse line, and

continued on to the next hydrant.

"When the line was laid, the pump returned to the fire and the high-pressure line was immediately put into operation. Before our 2½-inch line could be broken down into two 1½-inch lines and charged, we had the fire practically out with the high-pressure, with the exception of overhauling.

"When the truck started to lay the line down to the hydrant, I immediately went into the house and found the whole upstairs story in a mass of flames. I stepped right back down, closed the door, and as soon as the high-pressure line could be brought in, we opened the door, went up the stairway and cut loose with our high-pressure. It was only a matter of seconds before we encountered a terrific downdraft of steam which sent our men scurrying down the stairway.

"In just a few seconds they advanced up the stairs again, and there was no fire of any size in sight. By this time, our hydrant line, with two 1½-inch lines, was then charged and ready for operation, but we found that they were not needed.

"We continued to do our overhauling with the high-pressure. When we were through, only one downstairs room showed any sign of water damage except the kitchen. We used approximately 250 gallons of water for the entire operation.

"We feel sure that if we had attacked this fire in the usual manner with the two 1½-inch lines, the whole house would have been drenched from the operations upstairs. I can readily see where water damage is going to be cut down in the future through the use of fog. We considered this operation a success as far as high-pressure is concerned.

"The man that lived in the house was once a fireman in Homer but on the inactive list at the time. He was astonished at the amount of fire which we controlled and extinguished with the line and still did so little water damage to his downstairs rooms.

"While we are on the subject of high-pressure, there is another experience we had recently. During a severe electrical storm, lightning struck a barn about five miles outside the village. We were called and responded with our pumper which is equipped with the high-pressure line and with our emergency truck.

"When I arrived in my car ahead of the apparatus, I found about six farm hands trying to battle a fire which was located between the outside boards of the barn and the haymow. I could see through the cracks from the outside that the fire just inside was a bright red and spread over quite a large area.

"I sent back for our second pumper before our first one arrived, because I knew from experience we were going to have something on our hands. I had seen similar cases many times before and the barn was always lost.

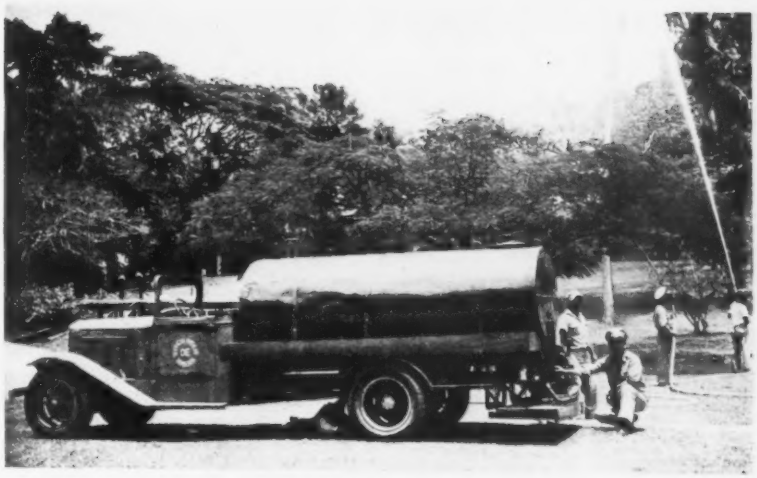
"When the first pumper arrived, I ordered the high-pressure line put into operation, and we removed the outside boards of the barn one at a time and extinguished the fire. We continued our operations until the whole fire had been controlled.

"When the second pumper arrived, a 2½-inch line was run to a nearby pond. This hose was not used until later when we were overhauling.

"When we had the fire area entirely opened up and knocked down, which took in a space on the side of the barn about 20 square feet, we began removing the hay. Hay knives were brought and the mow cut back about 15 feet from the opening. A horse fork was brought in through the opening and the hay drawn out by a tractor. In about one hour's time, the hay was all removed and wet down with the 2½-inch line to prevent re-ignition.

"I am not sold on high-pressure to the point where I care to replace our high-volume pumps with high-pressure as yet. I believe the thing that has to be engineered and put on the market is a midship pump with at least 600-gallon capacity which can also pump high-pressure. High-pressure lines would be more practical as a replacement to our booster line than the 2½-inch lines."

CHIEF L. WAKEFIELD
Homer, N. Y., Fire Department



Emergency Water Supply for Puerto Rican Volunteers

DURING a recent water scarcity in the city of Mayaguez, Puerto Rico, the local fire department (member NFPA), the Servicio Insular de Bomberos, under Chief Vicente Pabon, solved their water problem as illustrated and described by Chief Pabon:

"I studied the problem and solved it by placing a cylindrical tank, with a capacity of 1,200 gallons, on a Ford truck. The truck was equipped with a water pump with a discharge of 100 g.p.m. With a 100 feet of 1½-inch hose and using a ½-inch nozzle, it throws a stream 55 feet long. The arrangement provides water for a period of twenty-five minutes.

"In one of the pictures, it is throwing a straight jet, and in the other it is working with a spray nozzle."

MAKING A GOOD JOB OF IT

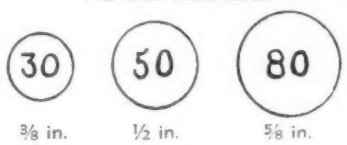
BY WARREN Y. KIMBALL

The Nozzle Tip as a Water Meter

MANY firemen do not appreciate the significance of the various sizes of tips employed on nozzles used for fire streams. While the reduction in the size of the nozzle's waterway at the tip is necessary to give the increased velocity needed to form a fire stream, each size of tip has its individual characteristic in that it will pass a given amount of water at an effective working pressure. Thus, every size of nozzle tip can be tagged with a discharge rating in gallons of water per minute.

Next on the fire fighter's list come the tips for the 1½-inch leader lines. With all sizes of nozzle tips it is recommended that the diameter of the tip never exceed one-half the diameter of the hose. The smaller the size of nozzle tip, the smaller will be the flow at a given pressure and the smaller the friction loss in the hose. The smallest practical size of tip for 1½-inch cotton rubber lined hose is ⅜-inch. This discharges just under 30 g.p.m. at 50 pounds nozzle pressure and, in general, is used with rural tank apparatus where water must be conserved. It does have more than twice the capacity of the booster stream.

1½-Inch Hand Lines



The most commonly used nozzle size on 1½-inch lines is the ½-inch tip. This is easy to remember as the 50 g.p.m. stream and, incidentally, results in 10 pounds friction loss per 100 feet of 1½-inch hose. Streams of this size on leader lines are able to take care of almost any dwelling fire where it is possible to work inside the building. It is a stream that can be handled by one man without difficulty. Probably more fires beyond the booster stage are put out with the ½-inch tip than by any other size of nozzle. This size tip can be supplied by a large water tank, but men at the nozzle must be careful not to waste water with 50 g.p.m. flowing.

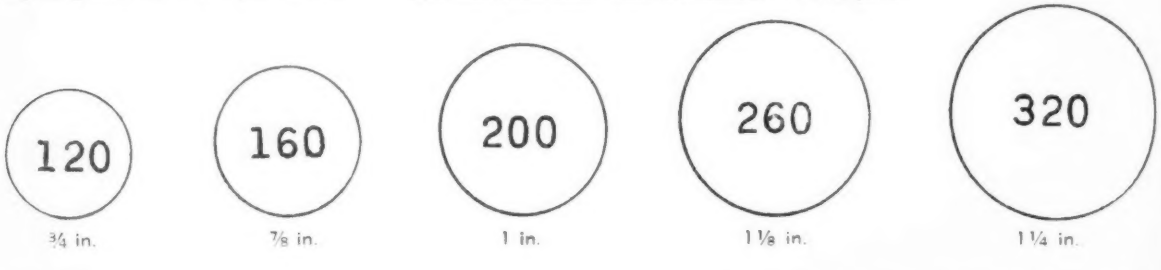
A number of the larger fire departments using 1½-inch leader lines are equipping this size hose with ⅝-inch tips. This allows them to smack the fire with the oomph of a ⅜- and ½-inch tip combined, because the ⅝-inch tip at 50 pounds throws 80 g.p.m. In some cases this size tip is supplied from the water tank on the apparatus and promptly backed up with the big line before the tank supply is exhausted. Experience has shown that where hydrants or other back-up supplies are available it is *always* good practice to back up small streams with the big line. As the back-up line is to be dropped anyway, why not hit the fire as hard as possible with the 1½-inch line. Where two 1½-inch leader lines are supplied from the big line, these smaller lines are putting as much water on the fire, with greater ease, and from two points of vantage, as a ⅞-inch tip direct on the big line.

Next we come to the tips for the "big line," the 2½-inch line using a shut-off or controlling nozzle. First is the ¾-inch tip, for many years the mainstay of the rural fire fighter. This tip does less than 120 g.p.m. with the result that no matter how long the line or how small the rural pumper, it was always possible to obtain a good stiff stream. Of course, the ¾-inch tip was not a heavy stream but it had good reach and was much to be desired over a feeble stream from a larger tip. The introduction of 1½-inch hose has, however, largely replaced the ¾-inch tip except as a reducer tip on the end of a larger tip for use on inside fires. Even here, the ease of handling 1½-inch hose appears to have the ¾-inch tip on the way out. Also, modern rural pumpers are capable of supplying larger tips.

The ⅞-inch tip begins to get into the range of a good fire fighting stream. It will take the full capacity of a 500-gallon pumper operating at 250 pounds pressure because of length of line or elevation. It should replace the ¾-inch tip in the rural fire service. It may be classed as a 160-gallon stream and thus has half the capacity of a 1¼-inch

Continued on page 26

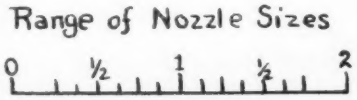
2½-Inch Hand Lines (shut-off nozzles) 45 - 50 p.s.i.



Once a fireman knows these figures his mind will automatically link the discharge from the nozzle he is going to use with the capacity that the pumper is able to deliver at the required pressure. He will be able to use the right amount of water to do the job and yet keep the hose stream output within the performance curve of his pumper.

The smallest size of nozzle generally used for fire stream purposes is the ¼-inch tip found on the booster line. At 50 pounds nozzle pressure, this size orifice will pass just under 13 g.p.m. As is well known, this is intended as a small first aid stream, but thousands of threatening fires have been nipped in the bud by effective use of the ¼-inch jet at close range. Its chief advantages are ease in handling and conservation of water with water damage at a minimum. It does, however, have a limited capacity, and fires have gotten away where too much confidence was placed in this size stream.

Range of Nozzle Sizes



Helicopter Highlights

Firemen's Meet at Wallum Lake, Mass.

THE FIFTH Annual Tri-State Firemen's Meeting at Wallum Lake State Park in Massachusetts, September 22, in all respects measured up to past performances of this gathering. Firemen from Connecticut, Massachusetts and Rhode Island gathered with their families in an all-day get-together at which new fire fighting methods and new fire equipment were put through the paces.

Highlight of the 1946 program was a demonstration by a Coast Guard helicopter of the maneuverability of this type of craft (see top and bottom photographs), indicating vast possibilities of usefulness in reaching fires in remote areas. Most of the fire departments demonstrating at Wallum Lake were volunteer organizations from the smaller communities who are experts in the best techniques of handling woods and brush fires, in addition to the usual building fires.

One of the most interesting new trucks came from Harmony, R. I. This has a 500 g.p.m. front-mount pump and a 600-gallon water tank. In addition to a load of 2½-inch hose and 1½-inch hose, the apparatus is equipped with three reels. Two of these have booster hose and the third carries 500 feet of 1⅛-inch cotton rubber-lined hose. This latter hose can discharge 30 g.p.m. through a ⅜-inch nozzle at 50 pounds with a friction loss of 15 pounds per 100 feet, or 20 g.p.m. through a 5/16-inch tip with about 7 pounds loss per 100 feet.

One interesting detail of the Harmony truck, as well as several othe pumpers demonstrated, was a 2½-inch gated intake at the rear of the apparatus for use in relay pumping. This intake is used to keep the large water tank on the apparatus full. Thus, the pump takes suction direct from its own tank in a relay operation. This enables the apparatus to go to work at a fire in rural areas with any size lines from ¾-inch to 2½-inch supplied from the tank and then a pumper relay is set up to keep the tank filled. In a test relay, a single 2½-inch supply line easily supplied four 1½-inch leader lines, plus booster lines.

In contrast with the helicopter and modern pumpers on display, East Greenwich, R. I., gave a pumping demonstration with their hand pump "Volunteer," vintage 1860 (see bottom photograph). With a husky crew on the "brakes," 125 pounds nozzle pressure was obtained at a 1-inch tip, giving 331 g.p.m. through a 2½-inch line.

A new 750 g.p.m. pumper from North Providence, R. I., demonstrated its prowess by pumping 900 g.p.m. through a 1¾-inch nozzle attached to a siamese connection supplied by two 2½-inch lines.

The U. S. Navy Fire Department from Quonset Point Naval Air Station gave a complete demonstration of Navy fire fighting techniques (photograph below), including extinguishment of an airplane crash fire with high pressure fog, various types of foam, operation of handy-billy pumps, and a new type helmet worn by air crash rescue workers.

The Wallum Lake meeting was under the direction of Chairman

Continued on page 20

Photo by Henry Marschalk

Firemen at Dedication of Maryland Fire Service Building

THE University of Maryland's new $160,000 Fire Service Building at College Park was dedicated September 28 in ceremonies on the campus that included a parade of 131 fire units from twenty Maryland counties and adjacent areas in Virginia and Pennsylvania.

The dedication ceremonies were held in the Ritchie Colliseum with Richard E. Vernor of Chicago making the dedication address. Mr. Vernor is manager of the Western Actuarial Bureau, Chicago, chairman of the Fire Department Instructors Conference, and past president of the NFPA. Speaking to 2,000 firemen and guests, he said, "Fire kills annually four times as many children as the dread disease polio — the nation's fire loss is mounting and new methods must be found to combat the rise."

Governor Herbert R. O'Connor greeted the firemen on behalf of the state. "State funds could not have been put to a better purpose. This building is Maryland's recognition of what volunteer firemen have done and are doing," he said.

Past-president Phil Ryan of the Maryland State Firemen's Association presented a gold badge to Chief James W. Just, director of the Fire Service Extension, and member of three NFPA committees, on behalf of the 240 firemen who attended the short course given at the university last September.

A demonstration of ladder and hose evolutions was given at the drill tower under the direction of Chief Just, assisted by Senior Instructor Curtis C. Larrimore. Taking part in the evolutions were members of the Hyattsville, Mt. Rainier, and Cottage City fire departments. Earlier in the day a demonstration was presented by a representative of the American-LaFrance-Foamite Corporation, featuring the company's latest cab-ahead 750-gallon pumper and 100-foot aerial ladder truck.

National Board Reports on Plastics Hazards

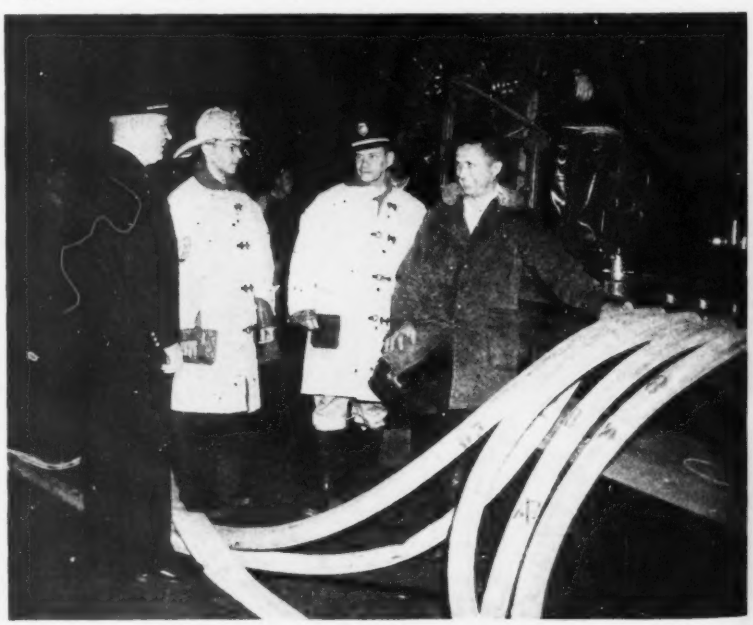
FIRE HAZARDS OF THE PLASTICS INDUSTRY has appeared as Research Report No. 1 of the National Board of Fire Underwriters Research Division of the Committee on Fire Prevention and Engineering Standards.

Plastics, before they appear on the market as "materials of tomorrow," involve certain hazardous manufacturing techniques.

The subject of fire safety and plastics hazards are treated in eight chapters as comprehensive as a 53-page text could be. Copies of the report may be obtained from the offices of the NBFU, 85 John Street, New York City.

The Fire Department of the District of Columbia recently tested a series of improved evolutions for developing heavy streams to combat major fires that might break out in the Capital. Evolutions included operation of water tower and wagon pipes supplied by 2½- and 3-inch hose as part of the department's program for making most effective use of water supplies available in every part of the city.

Shown below, l. to r., Chief Engineer Clement Murphy; Warren Y. Kimball, NFPA engineer and editor of FIREMEN, technical consultant for the tests; Deputy Chief J. A. Mayhew, F.D., D.C.; and Captain A. M. Grunwell of the fire department's Water Supply Board, in charge of the department detail making the tests.



23% OF ALL LARGE-LOSS FIRES IN 1945 WERE IN WAREHOUSES

3-Alarm Warehouse Fire Causes $260,000 Loss
2 Injured As Blaze Sweeps 3 Floors
Christmas Stocks Damaged As Cold Weather Hampers Firemen
Battling Blaze In Warehouse
General Alarm Warehouse Fire Causes Loss of $200,000
Companies Prevent Spectacular Flames From Spreading to Other Buildings
Costly Blaze Sweeps S. L. Building
Four Injured Fighting Spice Warehouse Fire

During 1945 there were 163 large-loss fires ($250,000 or over). 37 of these fires, or 23%, destroyed warehouse properties with direct losses estimated at $22,835,000 and inestimable indirect losses to the owners and to the national recovery.

The outstanding contributing factor in these large-loss fires was *delay in discovery of the fire and reporting it to the fire department.* In the absence of automatic protection most of the fires reached major proportions before fire fighting forces were summoned.

Whether it is a warehouse property or any other type of industrial or commercial occupancy, the most effective way to overcome such delays is through A. D. T. Automatic Protection Services which minimize the human element in the detection and reporting of fires. These include the *Aero Automatic Fire Detecting and Alarm System* for unsprinklered properties and *A. D. T. Sprinkler Supervisory and Waterflow Alarm Service* for sprinklered properties.

May we tell you how these services can be applied to provide greatly increased protection with possible substantial economies?.

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BOOKLET
IN COLORS

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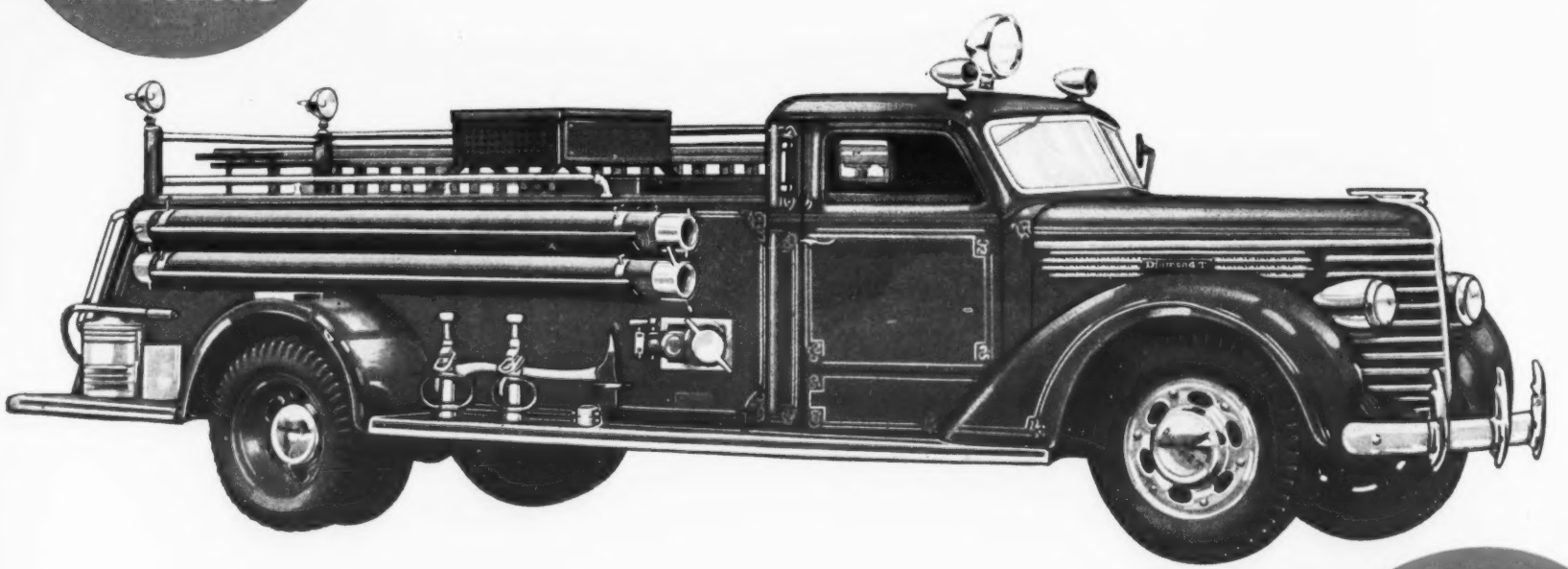

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Staten Island Volunteers Dismiss Appeal for Professional Replacement as "That Old Chestnut"

By Francis Sugure, reprinted in part from the New York Herald Tribune, *September 9, 1946*

ON STATEN ISLAND, Borough of Richmond, New York City, not a member of the last two big city volunteer fire companies still answering calls in the city lifted an eyebrow when informed recently that New York Fire Commissioner Frank J. Quayle had recommended that the volunteer fire-eaters roll no more.

Unfazed by the news which seems to number their days as active fire fighters, this band of unpaid firemen smoked their pipes and commented tersely, "So that old chestnut is around again. Every year since the first Ford we've heard that we were going out of business. It goes in one ear and out the other."

L. R. Barton, who has been captain of Richmond Engine Company, No. 1, since 1916, and a member of the company when it was organized in 1903, added this story:

"Way back in 1903, when we were getting a city charter for our company, the chief over in the Edgewater Fire Department, in New Jersey, said we wouldn't last two years. The city was going to take over the fire department. The city came in 1905, sure enough, but we've worn out many a horse and engine and thousands of feet of hose since then."

Over in Travis, Staten Island, at the large, red-shingled firehouse of the other volunteer outfit, the Oceanic Hook & Ladder Company, No. 1, Robert Minto, seventy-one, who has been with the volunteers since 1902, had a good laugh. "Those city fellows come here to fight one of our brush fires, and they get lost in the woods and all tangled up and can't get out for hours. Never do get to fight the fire."

All mention of paid firemen in volunteer circles is prefixed with the word "city," although the volunteers insist that they have the greatest respect for their professional allies.

Members of both companies agree that if Commissioner Quayle's recommendations go through, the fire companies could not be abandoned altogether. They would have to be replaced with paid firemen, a process that might take several years.

The volunteers cover sixty-three fire alarm boxes between them in Richmond

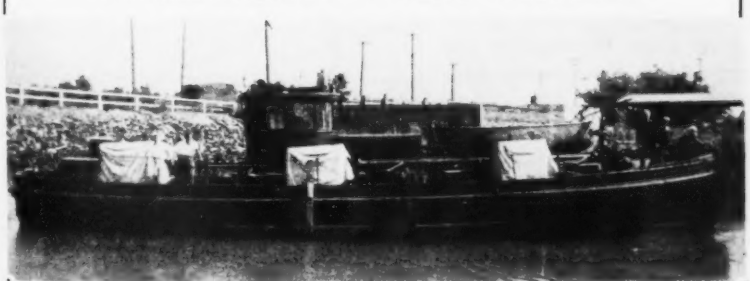
Continued on page 26

New York Herald Tribune Photos

Above. Chief Leroy Barton and Carl Kihn, of Richmond Engine Company, No. 1, Richmond, Staten Island, N. Y.

Right. Volunteer firemen of the Oceanic Hook & Ladder Company, No. 1, Travis, Staten Island, N. Y., in front of their firehouse. Seated on the running board is Alexander M. Glen. L. to r., Robert Minto, Jr. (in the driver's seat), Thomas Rosseau, Robert Minto, Sr., and Edward Vindgroski.

FIREBOAT FOR SALE



Built 1929; heavy construction; 65' x 16' x 8'; Powered by 180 HP Diesel; Built-in CO_2 fire extinguishing system. Equipped with 6 Chrysler powered Hale centrifugal pumps each of 500 gpm capacity. Two 2" deck monitor nozzles, 1200 ft. 2½" hose, suction hose, nozzles. This craft in A-1 condition.

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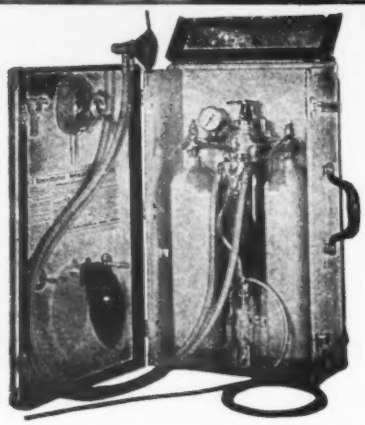

There are important reasons why so many fire departments, hospitals and industrials have purchased additional E & J Resuscitators after successful experience with their first unit. These automatic breathing machines are built to include vital life saving features not found in other equipment. A comparison of other equipment and methods by your department will quickly reveal why the vast majority of fire departments have chosen the E & J. We invite your thorough investigation.

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Acme

The fall of the sprinkler gravity tank of the Wellesley Woolen Company was caught by the photographer during the $900,000 fire that destroyed factories in Wellesley and Newton, Mass., on October 3.

Fire started in the 300-foot long woolen mill, of wooden construction, that was protected by an ancient and obsolete sprinkler system fed by an old 4-inch dead-end main. Flames jumped across a narrow alley to destroy the Lenk Manufacturing Company's metal-working plant and then jumped more than 100 feet across the Charles River to destroy an unsprinklered factory building in the city of Newton.

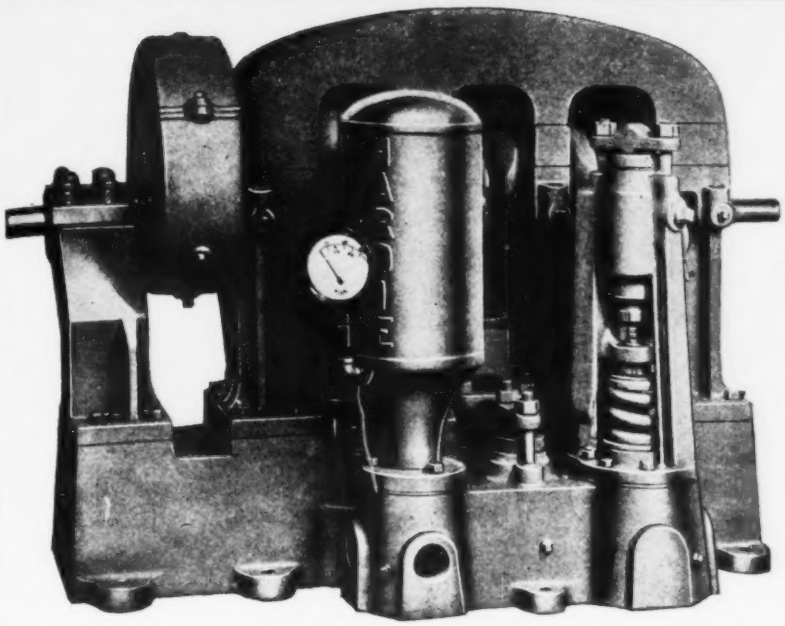
The fire area on the Wellesley side of the Charles was surrounded on three sides by river and swampland so that firemen could fight the fire from only one side. The Newton factory was on an island to which access was also difficult. General alarms were sounded in both communities and help came from Needham, Natick, and Waltham in response to mutual aid calls.

Fourth Edition of British Drill Book

THE *National Fire Service Drill Book*, a pocket sized (4 x 6½ inches) book for members of the British National Fire Service, has been issued in a Fourth Edition (March 1946) with some changes based upon the return of the fire service of peacetime fire fighting. A new section on fireboat drills is the most important addition.

Published by His Majesty's Stationery Office, London (226 pages, paper covered, ninepence), the book is obtainable in the United States from the British Information Services, 30 Rockefeller Plaza, New York 20, at 25¢.

FOG OR STREAM AT 800 P.S.I.



Hardie pumps for Fog Fire Fighter trucks are available in two sizes. The Hardie LCXA (at left) meets any heavy duty two gun requirement with 60 gallons per minute at 800 P. S. I. The Hardie XCXX one gun pump delivers 35 gallons per minute at 800 P. S. I.

Hardie pumps are especially designed for the gruelling duty of fire fighting. They develop full rated capacity and pressure easily at slow speed (118 to 130 R.P.M.). They have the inbuilt stamina to stand up without faltering under long periods of sustained high pressure.

Hardie pumps and Fog guns are standard equipment in Fog Fire trucks built by leading manufacturers of fire fighting equipment. Specify the Hardie pump when you purchase new or convert old trucks. Write for complete information and specifications.

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No Extra Cost

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Press Association, Inc.

Fire does it again — one soldier died and 175 persons were routed from their beds when fire swept the 4-story Sheffield-Manor Hotel in Chicago on October 2. In the photograph above, firemen are applying water to the upper floors of the hotel.

FDNY to Honor Hero Dead

THE Fire Department of New York honored its members who have died in the discharge of their duties or in the service of their country in an annual memorial service on October 6. During the past year, the department lost thirty-three men. Since the department's professional organization in 1865, nearly 500 city fire fighters have been killed in the line of duty.

Firemen's Meet at Wallum Lake, Mass.

Continued from page 13

Willard Hall, Engineering Committee, Woonasquatucket Valley Firemen's League. The League was one of the earliest members of the NFPA Volunteer Firemen's Section. Personnel of the Rhode Island Forestry Department and the Massachusetts Department of Conservation were in attendance.

A Massachusetts Conservation Department "brush breaker" fire truck was demonstrated. This is a 6-wheel drive vehicle armed with boiler plate in front and provided with heavy tree deflectors at the sides. It carries 1,000 gallons of water and is armed with two high pressure hand guns, a line of 1⅛-inch forestry hose, and a 1½-inch line (used mainly to defend the truck against being trapped by flames).

GENOA, N. Y. *Standard FMC Fog Fire Fighter delivered to the Genoa Fire Dept.*

FORESTVILLE, VA. *Standard FMC Fog Fire Fighter delivered to the Forestville Volunteer Fire Dept., No. 2.*

E. CANTON, OHIO. *Standard FMC Fog Fire Fighter delivered to the Osnaburg Township Fire Dept.*

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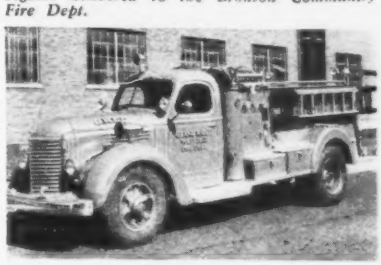
Investigate FMC. For fast attack ... quick quenching ... minimum water, and low water damage.

BRONSON, MICH. *Standard FMC Fog Fire Fighter delivered to the Bronson Community Fire Dept.*



GRAND RIDGE, ILL. *Standard FMC Fog Fire Fighter delivered to the Grand Ridge Volunteer Fire Dept.*

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CUTCHOGUE, L. I., N. Y. *Standard FMC Fog Fire Fighter recently delivered to Cutchogue Fire Department. Carries its own water supply—provides two guns of 30 gallons each at 600 lbs. (or more) nozzle pressure—complete in every respect.*

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Chief Max Smith Dead

CHIEF MAX SMITH, South Porcupine, Ont., recently died at his home. Chief Smith was a past president of the Dominion Association of Fire Chiefs, and his company is a member of the Volunteer Fire Company Section of the NFPA.

Volunteers Battle $250,000 Fire

Continued from page 9

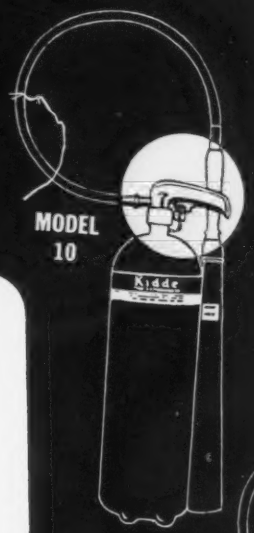
hit as a very good piece of warning equipment. A red light, swinging back and forth in front of red reflectors, operated on a regular automobile battery.

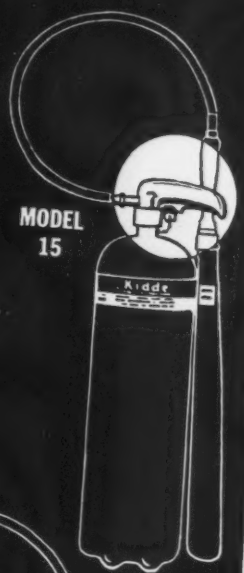
A hydrant pressure of 70 to 80 pounds was maintained at all times on the five hydrants surrounding the fire. Springville has an elevated tank with a capacity of 250,000 gallons. Two deep well pumps, capable of 1,200 g.p.m. together, were started at the beginning of the fire, pumping into this tank. At the end of the fire, the tank was still 40 percent full. Five hydrants were used, seven lines at the peak of the fire.

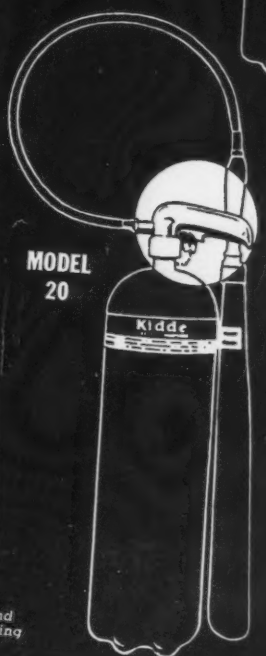
Quoting directly from Chief Rouse's report, "I believe that the reasons for the fine results obtained at this fire can be summed up under the heading *training*. All our fire departments had an opportunity to receive training during the war. But what has happened to our training program in the state? It is a disgrace that this great state cannot wake up, forget politics and have a school where volunteer firemen can be trained to battle the ravages of fire. Other states have schools. It's time New York State got on the beam. Deputy Commissioner Harold Becker, of Buffalo, has given the Springville Fire Department fire training and his efforts brought results at this fire."

The fire, which began at 3:08 Friday morning, was not completely extinguished until Sunday evening at 8:00. During overhauling operations, considerable difficulty was encountered in the rear of the mill where floors had caved in from the weight of the bagged feed. There were several small fires under these floors and it was necessary to remove great quantities of bagged feed in order to reach them.

The cause of the fire, while not exactly known, may have been a short circuit of the electrical wires. Damages were estimated at $250,000.







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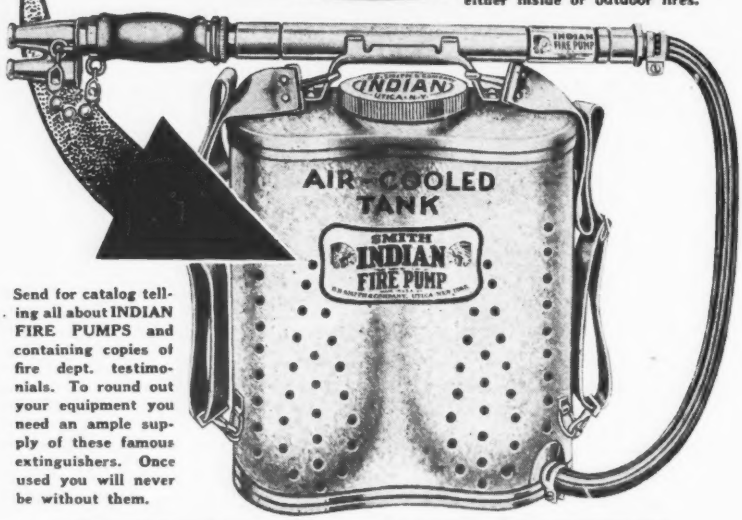

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Let 'Em Lie!

SINCE the cessation of OCD and wartime first aid course, the public has forgotten many of the most essential safety rules and practices. The Rockland County, N. Y., Emergency and First Aid Council has launched a campaign to remind people of the cardinal rule to be recalled by those who would practice first aid. Let 'em lie! Attempting to move accident cases before a doctor or other qualified first aid-er arrives is extremely dangerous and frequently fatal.

The button pictured above was prepared to feature the council's slogan and to be worn by every man, woman and child within reach of the campaign. It should be a constant reminder to those who wear it and those who see it of the first step *not* to take when arriving on the scene of an accident.

Fire companies who wish to distribute these buttons in their communities may obtain them from Secretary William P. Babcock, Rockland County Emergency and First Aid Council, Inc., 218 North Midland Avenue, Nyack, N. Y.

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StrangleAIR IS SAFE

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are designed expressly and exclusively for foam. Light, sturdy, dependable units, easy to clean and handle. Available in standard sizes from 2½ GPM to 250 GPM through fire appliance supply houses.

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StrangleAIR FOAM • FIRE-SNUFFER NOZZLES

AMERICAN DIE & TOOL COMPANY, INC., East Reading, Pennsylvania

The Nozzle Tip as a Water Meter

Continued from page 12

nozzle. It is possible, also, to supply this tip through more than 1,000 feet of 2½-inch hose with the pumper operating at capacity.

Now comes one of the most frequently used tips for the 2½-inch line. The 1-inch tip is a 200 g.p.m. stream at 46 pounds nozzle pressure and discharges slightly more at higher pressures. Of course, with any tip the discharge goes up as the pressure increases, but, in general, it is best to go to the next larger size nozzle tip rather than struggle with nozzle pressures above 60 pounds. Likewise, if the nozzle pressure falls toward 30 pounds, and it is not practical to increase the engine pressure, the next size smaller tip should be used.

The 1-inch tip is the standard size for 2½-inch lines that exceed 500 feet in length. The 200-gallon flow causes a friction loss of only 10 pounds per 100 feet. It is a good size tip to use on the 2½-inch back-up line from a water thief that is supplying 1½-inch lines, because with two 1½-inch lines in operation there is still enough water for a 1-inch tip on the big line. Any larger size might result in poor streams on all three lines. When in doubt as to the layout and water supply in a suburban district, it is ususally safe to grab the nozzle with the 1-inch tip.

NOW we come to the tip that is usually referred to when speaking of a "standard" fire stream. The 1⅞-inch tip throws in the order of a ton of water a minute. The flow ranges from 250 g.p.m. at 45 pounds to 265 g.p.m. at 50 pounds. This is the tip that is most generally used in city fire fighting where hose lines are from 300 to 500 feet in length. It is an effective hand line that is not too difficult to handle with a three-man pipe crew. It is considerably more effective than the 1-inch tip. We have called it a 260-gallon stream, but some readers may wish to remember this and the other tips by some exact flow figure at some particular nozzle pressure. At 45 pounds nozzle pressure, two of these tips take the full capacity of a 500-gallon pumper and one takes all the water from the same pumper working at 200 pounds pump pressure.

The largest tip normally employed on a shut-off nozzle is the 1¼-inch tip that puts out approximately 320 gallons at effective working pressure. This tip is seldom used on a single line of 2½-inch hose more than 300 feet long because of the high friction loss. It also requires adequate manpower when used for any length of time, as it has a back pressure of 117 pounds. Three 1¼-inch tips take the full capacity of a 1,000-gallon pumper. Several large city departments use this as their standard nozzle size when fire has passed the leader line stage.

Staten Island Volunteers Dismiss Appeal for Reinforcement

Continued from page 17

and Travis, and although a city fire company always answers the same call, the volunteers say that in their own territory they arrive first, have the hose all hooked up, and are holding the fire when the "city bunch" arrive.

Captain Barton, who is sixty-one, said that the firehouse they now use sheltered their gasoline-driven pump in the old days when it was moved to a fire by hand. Later the firemen hired any horse that was handy — $5 for a single horse. Horse owners made a game (inspired by the profit motive) of racing to the firehouse when they heard the fire bell. In 1914 an Oldsmobile truck replaced the horses, and now a 1936 truck rolls for the volunteers.

In Travis, Alexander M. Glen, sixty-three, who joined the Oceanic company forty-three years ago, and Robert Minto, Jr., a comparative youngster of thirteen years' experience, take a modest pride in their company, which was organized on November 28, 1881. In the early days they really had a hook and ladder and kept two horses in stalls in the rear of the house at night. A converted Chevrolet truck is the fire truck now.

The volunteers receive no pay. The city gives the Richmond company $1,200 a year for maintenance, and the Travis company $1,000. Both companies own their houses and all their equipment.

DESIGNED TO TAKE IT...

Each year, with the help of National Fire Prevention Week, you do your best to educate your community in the defense against fire.

But, in spite of this intensive campaign, America still loses **over 9,000 lives a year and over a million dollars a day, through fire!**

Facing these facts, it is more important than ever to keep your fire-fighting apparatus adequate, reliable and READY. That's why experienced Fire Companies insist on a pump tough enough to stand up under the call for "More Volume and Pressure"!

Because Hale Pumps are designed to "take it", these companies repeatedly specify a Hale for their new apparatus.

Write today for up-to-date information on Hale Fire Pumps . . . built in all standard capacities.

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FIRE PUMP COMPANY
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NFPA Office Staff on the Air

INITIATING Fire Prevention Week with a broadcast, four members of the executive office appeared on the Yankee Network program, "Quiz of Two Cities," from Station WNAC, in Boston, on October 4.

The quiz consists of weekly correct-answer competitions between Boston and Providence, R. I., teams. Opposing the NFPA quartette were four members of the Providence Fire Department.

Members of the NFPA team were Horatio Bond, chief engineer, Chester I. Babcock, Jr., of the Fire Record Department, Marion C. Pike, Public Relations Department, and Anne B. Keller, associate editor of FIREMEN magazine. NFPA team won.

National Fire Protection Association, International

Associate Membership

VOLUNTEER FIRE COMPANY SECTION

($10 annual dues) Eligible:
(1) all bona fide volunteer fire organizations in any community.
(2) all fire departments and companies in communities of less than 25,000 population.
(3) all industrial fire brigades.

Member volunteer fire companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members, receive at their headquarters, one copy of all publications sent to NFPA associate members.

ASSOCIATE MEMBERSHIP ($10 annual dues) Eligible: Individual fire department officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA **Quarterly**, the monthly **News Letter**, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

New members of the Volunteer Fire Company Section are:

Bellevue Volunteer Fire Dept., Inc., Peoria, Ill.
Brawley Firemen's Assoc., Brawley, Calif.
Dexter Fire Dept., Dexter, Mo.
Elmira Heights Fire Dept., Elmira Heights, N. Y.
Franklin Fire Dept., Franklin, Tenn.
Mayfield Heights Fire Dept., Mayfield Heights, Ohio
Montgomery Fire Dept., Montgomery, W. Va.
Oak Harbor Volunteer Fire Dept., Oak Harbor, Ohio
Ocean Beach Volunteer Fire Dept., Ocean Beach, L. I., N. Y.
Ocean City Fire Dept., Ocean City, N. J.
Portola Fire Dept., Portola, Calif.
Volunteer Fire Company of Mill Hall, Mill Hall, Pa.

Better FIRE STATIONS *with* CIRCUL-AIR

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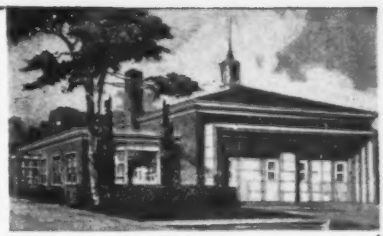

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Regular Firemen's Boots, ¾ length, available now. We can also supply REGULAR Firemen's Boots, felt lined, reinforced instep. See your Midwestern Manufacturing Company dealer for prices or write the factory.

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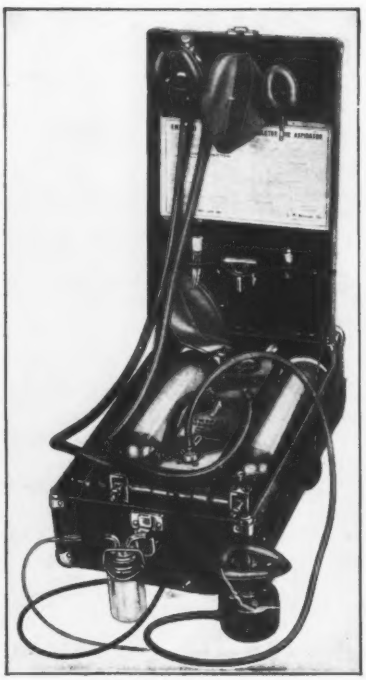
Play safe with the



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MANUFACTURERS' ANNOUNCEMENTS

New Fire Hose Is Water- and Mildew-Resistant

American-LaFrance-Foamite Corporation, Elmira, N. Y., announces a new "All-Weather" line of water-repellent, mildew-resistant fire hose. It is made exclusively for American-LaFrance by the Goodyear Tire and Rubber Company.

According to the manufacturer, both white cotton hose jackets of this line are water-repellent. Both hose jackets get a double treatment of the water-repellent process to make sure that all fabric is impregnated. A mildew-inhibiting "Alaseptic" treatment is applied at the same time the hose receives the water-repellent treatment.

The "All-Weather" hose embodies a new and important development in jacket design. The edges of this hose are

strongly re-inforced with special high-tension yarns having the greatest possible resistance to wear at the points where it is most needed.

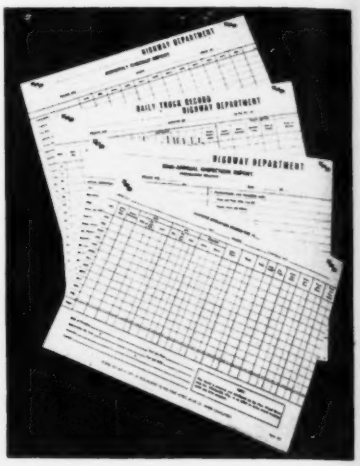
Complete and fully illustrated literature is available upon request to the manufacturer.

Attractive Leaflet Describes Mearlfoam—5

The Mearl Corporation of 153 Waverly Place, New York 14, has recently published a 4-page leaflet describing its product "Mearlfoam—5". This is a liquid mechanical foam compound for use in the extinguishment of Class B fires (flammable liquids). "Mearlfoam—5" was used extensively during the war by both the Army and Navy and is now available for civilian fire protection purposes. A copy of the leaflet will be sent to any reader on request to the company.

Record Forms for Trucks

The Four-Wheel Drive Auto Company, of Clintonville, Wis., a well known manufacturer of fire apparatus, has available a system of record forms for truck operation. While these forms were designed specifically for commercial trucks, many small fire departments might find them extremely helpful as a check list for keeping track of the condition of and operation experience with their apparatus. A proper record of the use of fire equipment is frequently of considerable value when request must be made for new apparatus. The records are also of value in making a monthly check-up and maintenance report. Requests for sample forms should be mailed to the Cost Records Department, Service Division, Four-Wheel Drive Auto Company, Clintonville, Wis.



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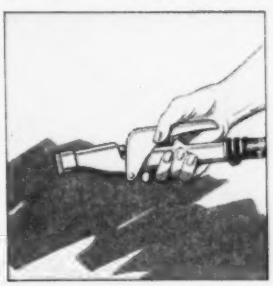

Open nozzle and direct chemical stream at base of flames.

Listed and Approved by Underwriters' Laboratories and Factory Mutual Laboratories

53% More Fire Stopping Power

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ANSUL-DUGAS FIRE EXTINGUISHERS

Write today for authoritative data showing characteristics of all types of approved hand fire extinguishers.

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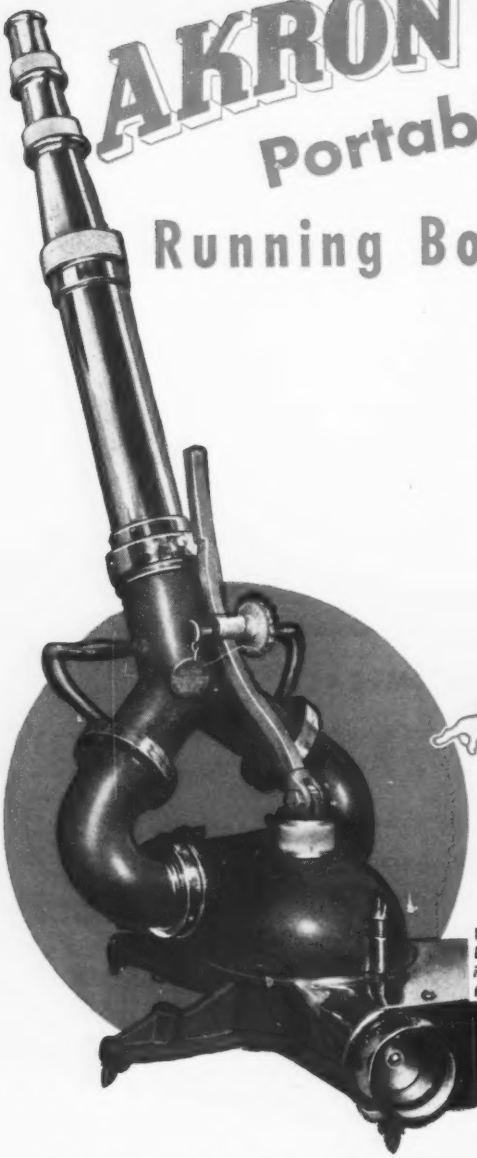
AKRON MULTIVERSAL Portable Deluge Nozzle and Running Board Mounting Fixture



. . . No fire department, large or small, should be without the high capacity, flexible, efficient Akron Multiversal Portable Deluge Nozzle.

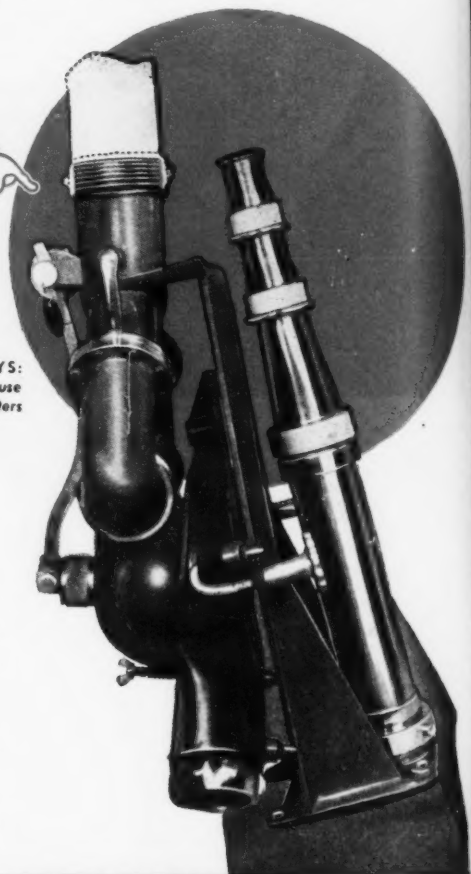
COMPLETE one-piece-unit — ready to connect the number of hose lines desired.

SELF-SUSTAINING — once placed in position needs no further attention.

MAXIMUM FLEXIBILITY — stream may be directed up or down, or in a complete circle.

MAXIMUM CAPACITY — handles from one to four hose lines.

FIREMAN FREDDIE SAYS: *Every Akron Deluge Nozzle in use is like adding several fire fighters to the force.*



The Akron Multiversal Nozzle Running Board Fixture, illustrated at the right, provides quick, efficient handling at the scene of action. Designed for mounting entire unit on running board of apparatus. A compact, quickly removable unit.

Also available — Fixture for mounting on top of apparatus, permitting use of Multiversal as a deck pipe.

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FIRE FIGHTING EQUIPMENT

APPROVED BY U. S. BUREAU OF MINES

for Complete respiratory protection...

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A SINGLE REPLACEABLE CANISTER DOES THE WHOLE JOB!

WHERE you can't breathe with safety in smoky, gassy, oxygen-lacking confined spaces—wear CHEMOX! Chemox supplies all the oxygen you need, no matter how hard your exertion or how tough and dangerous the firefighting job. Chemox is light and compact—easy to wear—you can change canisters in a matter of seconds!

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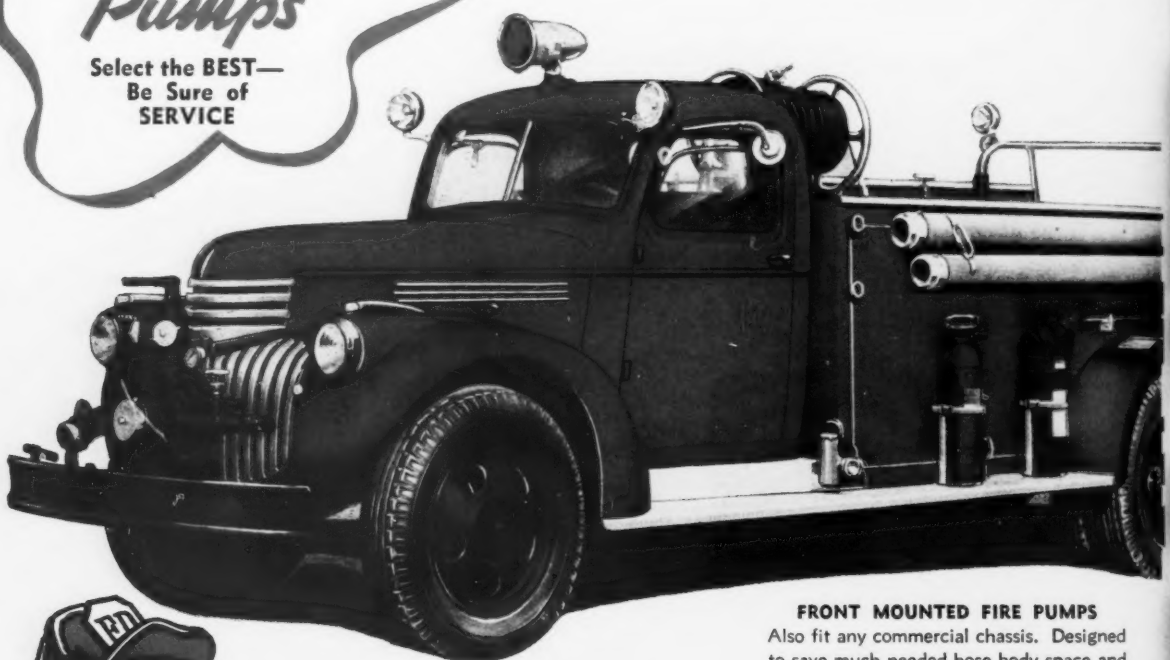
Will fit any commercial chassis. Available in several sized models. Built to meet and exceed all Underwriters' requirements.



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Also fit any commercial chassis. Designed to save much needed hose body space and permit larger booster tanks. They are setting the standard for modern fire-fighting.

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